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ABSTRACT

Findings of a study that examined the relationship of administrative role conflict and ambiguity with stress and burnout are presented in this paper. A survey sent to 1,000 Washington State administrators (250 each from the following groups--elementary, junior, and senior high school principals; and superintendents) elicited 741 returns, a 74 percent response rate. Findings indicate a strong association between emotional exhaustion and role conflict/ambiguity, and between ambiguity and personal accomplishments. Only one of four factors of stress, conflict-mediating stress, was highly associated with role conflict and ambiguity. Overall, the data support prior findings that role conflict and ambiguity represent distinct aspects of professional burnout. The recommendation is made to include mediation training in administrator-preparation programs. Two figures and two tables are included. (Contains 43 references.) (LMI)

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The Association of Role Conflict and Ambiguity with Administrator Stress and Burnout

(Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, Georgia, April 12-16, 1993)

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The Association of Role Conflict and Ambiguity with Administrator Stress and Burnout

Introduction

Popular writers and academic researchers have added volumes to the literature in the past decades on school administrator stress. Since 1980, over 60 studies have explored the causes, responses and consequences of administrator stress. Most of these data-based studies have investigated the sources of stress while fewer have explored the associations between stressors, coping, burnout and intervening variables such as locus of control, sex role stereotypes, and role conflict and ambiguity.

These research studies have examined several levels or stages of stress, from its nature (Chichon & Koff, 1980), types and sources (Cooper & Marshall, 1976; Feitler & Tokar, 1981; Gmelch & Swent, 1982), responses (Gmelch, 1988; Swent, 1983), and consequences (Bloch, 1978) to administrator's coping effectiveness (Hiebert & Mendalgio, 1988; Gmelch & Chan, 1992). Nevertheless, many of these and other studies have failed to investigate the connection between stress and burnout with administrator role conditions such as role conflict and role ambiguity. While the association between role conflict and ambiguity with teacher burnout was verified by Schwab and Iwanicki (1982), the exploration into administrative stress has yet to be investigated. The present study proposes to study the relationship of administrative role conflict and ambiguity with stress and burnout.

Theoretical Framework

A number of models have emerged since the 1970's which recognized the need for a transactional explanation of the components of stress (Heibert, 1987). Many of these components identified are similar and provided the cornerstones for the present study. McGrath (1976) first explained stress as a four stage, closed-loop process beginning with situations in the environment (A), which are then perceived by the individual (B), to which the individual selects the response (C), resulting in consequences for both the individual and the situation, which closes the loop (Figure 1). Each of the four stages are connected by the linking process of cognitive appraisal, decision, performance, and outcome. The four stages postulated by McGrath have served as sound building blocks for the development of stress models. Each subsequent model appeared to have been customized with appropriate feedback loops, moderator variables, and the process variables embellishing the relationship between the four basic stages in a manner to meet the research and application needs of each investigator.

Administrator Stress Cycle

In a like manner, the Administrator Stress Cycle (Gmelch, 1982) has been built on McGrath's foundation. This four-stage stress cycle guides the present study of educational administrators in Washington public schools (Figure 2). The first stage of the cycle is a set of demands, or stressors, placed on administrators. While McGrath hypothesized six dimensions of stress, most measures of job-related stress fail to reflect this multidimensionality (e.g., Indik, Seashore, & Slesinger, 1964). A study by Gmelch and Swent (1982) sought to overcome this deficiency in stress measures and developed the Administrative Stress Index which reflected the multidimensionality of administrator stress. Through factor

analysis, four sources of stress were identified which approximate McGrath's hypothesized dimensions. The first source, **role -based stress** is perceived from administrator's role-set interactions and beliefs or attitudes about his or her role in the schools. The second source of stress, **task-based**, arises from the performance of day-to-day administrative activities, from telephone and staff interruptions, meetings, writing memos and reports, to participating in school activities outside of the normal working hours. The third source, **boundary-spanning stress**, emanates from external conditions, such as negotiations and gaining public support for school budgets. **Conflict-mediating stress** is the fourth source. This type of stress arises from the administrator handling conflicts within the school such as trying to resolve differences between and among students, resolving parent and school conflicts, and handling student discipline problems.

Stage two consists of the perception or interpretation of the stressors by the individual. Administrators who perceive demands as harmful or demanding will create stress within their lives and approach their work with intensity. The classic study of the effect of Type A behavior and health by Friedman and Rosenman (1976) highlights the impact of perception on stress.

The third stage of the cycle presents choices to the individual. The administrator responds to the stressor if it is perceived to be harmful, threatening, or demanding. Individuals use coping strategies when they believe they can counteract the stressor in a positive manner.

The fourth stage of the stress cycle, consequences, takes into account the long range effects of stress. The consequences can lead to headaches, ulcers, illnesses, or disability. Maslach and Jackson (1981) separated the consequences of stress into three dimensions of burnout: **emotional exhaustion**, **depersonalization**, and feelings of low **personal accomplishments**. Emotional

exhaustion occurs when emotional resources are depleted. Individuals feel they are no longer able to give of themselves at a psychological level. The second level, depersonalization, occurs when individuals feel negative and have cynical attitudes about their clients. This may lead to dehumanization: the perception of clients as deserving of their troubles/problems (Ryan, 1971). The third aspect of the burnout syndrome is the feeling of reduced personal accomplishments. These individuals may feel unhappy about themselves and dissatisfied with their accomplishments on the job.

Located between the four stages of the stress cycle are filters which can influence and affect the interaction among the stages. Of interest in this study is the association of role conflict and ambiguity as intervening variables or filters with the constructs of stress and burnout.

Role Conflict and Role Ambiguity as Stress Filters

Administrators are often confronted with situations which require them to play a role which conflicts with their value systems, or play two or more roles which are in conflict with each other. In addition, the role or roles administrators must perform may not be clearly articulated in terms of behaviors or performance expectations. The former situation is termed *role conflict* and the latter as *role ambiguity* (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964).

The research on role conflict and ambiguity has been extensive, although several areas are still relatively unexamined. Over the past decade an increased interest has been shown in the use of role theory to describe and explain occupational stresses (Van Sell, Brief & Schuler, 1981). In fact, the best documented outcomes of role conflict have been shown to be job satisfaction and job-related tension (e.g., Beehr, Walsh & Taber, 1976; Rizzo, House & Lirtzman 1972). On the other hand, experimental and longitudinal studies of the effects of

role ambiguity show negative correlations with work satisfaction, but insufficiently discriminate with the outcome of role stress (Keller, 1975).

In general, Kahn and his associates (1964) have isolated the constructs of role conflict and role ambiguity as important aspects of organizational stress. Studies that have been built on Kahn's work have found that role conflict and ambiguity in various professions significantly affect personal stress (Van Sell, Brief & Schuler, 1981). Although these studies have indicated the stress - role conflict and ambiguity relationship, the construct for stress has been generic in nature without investigation into the specific dimensions of stress which are associated with role conflict and ambiguity.

Study Objectives

The present study proposes to assess the association of role conflict and ambiguity with the administrative stress cycle. Specifically,

(1) What is the association between role conflict and role ambiguity and the specific dimensions of administrator stress?

(2) What is the association between role conflict and role ambiguity and the consequences of burnout?

(3) What is the association between role conflict and role ambiguity and other intervening stress variables such as personal, interpersonal and organizational factors?

Research Design

The population for this study is Washington state principals and superintendents, stratified by the four school divisions of educational administration: elementary principal, junior high/middle school principal, high

school principal, and superintendent. A random sample of 250 administrators from each of these four divisions was selected as subjects for the study.

Each subject received an Administrator Work Inventory (AWI) which consisted of three sections. The first section contained the 35 item *Administrator Stress Index* (ASI) previously developed and validated by Gmelch and Swent (1984) and further factor analyzed by Koch, Tung, Gmelch and Swent (1984) resulting in four administrative stress factors: task-based, role-based, conflict-mediating and boundary-spanning stress.

Section two of the survey instrument consisted of the Maslach Burnout Inventory (MBI) which has been tested, validated, and normed for educators. The MBI contains 22 questions which assess three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishment.

The third section included the Role Questionnaire developed by Rizzo, House and Lirtzman (1970). Approximately half of the studies Van Sell, Brief and Schuler (1981) reviewed were based on self-report instruments to discover correlates of conflict and ambiguity for particular occupations. Most of the investigations have used the Role Questionnaire to determine the role incumbent's role conflict and role ambiguity. A psychometric evaluation of this instrument across six samples concluded that its continued use appears to be warranted (Schuler, Aldag, & Brief, 1977). The few studies using multiple methods (e.g., Caplan, Cobb, French, Van Harrison, & Pinneau, 1975; Kahn et al., 1964) have found agreement between questionnaire and interview data on role conflict and ambiguity.

The AWI also included other intervening variables such as sex-role classification (Bem, 1975, 1981), support systems, and demographic data pertaining to age, gender, years of experience, and level of administration.

Of the 1,000 surveys which were sent to school administrators, 741 were returned for a response rate of 74 percent. The responses by position were proportionally equal across all levels of administration: superintendents, 161; high school principals, 177; middle school principals, 149; and elementary principals, 168. The average subject was 47 years old and had 14 years of administrative experience. The median hours worked per week was 55 and they averaged three hours of exercise per week and attributed 65% of their total life stress to their work.

Results and Discussion

The first step prior to exploring the association between role conflict and ambiguity and stress and burnout was to re-examine the validity and reliability of the original four stress factors in the Administrative Stress Index. The instrument was initially developed in 1977 with a sample of 1855 school administrators (Gmelch and Swent, 1984) and replicated in over 50 studies throughout the United States over the past decade. However, the original factor analysis of the 35 item ASI, which yielded four factors consisting of 25 items, has not be replicated. Once again the underlying structure of the ASI was determined by a principal components varimax solution with a minimum specified eigenvalue of 1.0. Whereas the 1982 analysis used a .30 loading criterion (Koch et al., 1982), items in this reanalysis that failed to load at least .40 on any factor were dropped.

Once again four factors emerged from the factor analysis with 29 items loading on the factors. The factors of **task-based**, **boundary-spanning**, and **role-based** stress contained the same original items with loadings ranging from .80 to .42 on their respective factors. The **conflict-mediating** stress factor was augmented to seven items from the original three. The additional items and

loadings were: "evaluating staff members' performance" (.51), "trying to resolve differences between/among staff" (.41), "having to make decisions that affect the lives of others" (.47), and "supervising and coordinating the tasks of many people" (.49).

The Association of Stress and Role Conflict and Ambiguity

Given the revalidation of the stress factor constructs, multiple correlations were used to test the association between the stress factors and role conflict and role ambiguity. The level of confidence to determine significance was established at the .05 level. Table 1 displays the results of the multiple correlations. Due to the large sample size many associations may be statistically significant but practically insignificant. To facilitate interpretation and discussion of the data analysis, the correlation coefficients were categorized by strength of relationship denoted. French and Caplan (1972) used the following categories to discuss the results of their job-related stress research:

r = .20 - .29 is a very weak relationship

r = .30 - .39 is a weak relationship

r = .40 - .49 is a moderate relationship

r = .50 - .59 is s substantial relationship

r = .60 -.69 is a strong relationship

The association between role conflict and conflict-mediating, role-based and task-based stress were significant at the .05 level. However, using the above guidelines to interpret the results from Table 1, only the association between conflict-mediating stress and role conflict appear to have a substantial relationship. Therefore, the role conflict school administrators face most closely associates with their efforts in trying to resolve differences between and among students, staff, parents and the school.

Table 1. Coefficients of Correlation between Stress Factors and Role Conflict and Role Ambiguity

	Stress Factors			
	Conflict-Mediating	Role Conflict	Boundary-Spanning	Task-Based
Role Conflict	.50**	-.13**	.06	-.10*
Role Ambiguity	-.41**	.10*	- .14**	-.07

*p < .05 **p > .01

More specifically, administrators may find incongruity of the expectations associated with their role, thus experience stress from not being able to resolve it. Stress may ensue due to several types of role conflicts (Kahn et al, 1964): (1) an administrator receives expectations from a parent, student or staff member which are incompatible with his or her value system (administrator-client role stress and conflict); (2) an administrator is caught in the middle of expectations between a parent and teacher which are incompatible (client role stress and conflict); (3) administrators find themselves unable to resolve the incompatibility between their own expectations and those expected by their position (administrator role stress and conflict); (4) pressures administrators experience from one role -- being a support person for teachers -- are incompatible with another role -- having to evaluate staff teachers' performance (inter-role stress and conflict); and (5) administrators have to perform too many compatible roles but in too short a time period (role overload stress and conflict).

The substantial correlation between the conflict-mediating stress factor and role conflict may also be explained psychometrically. Examination of the role conflict scale developed by Rizzo, House, and Lirtzman reveals a peculiar situation. The eight items of the scale are all worded to represent stressful (i.e.,

conflict-laden) characteristics of the role. Therefore a high score on these items indicates feelings of role stress (Tracy and Johnson, 1981). While the role conflict scale and conflict-mediating factor have many dissimilar items, four of the seven ASI conflict-mediating items predominately addresses "client-administrator" conflict and three of the eight role conflict scale items deal with incompatible roles between or among groups.

With respect to role ambiguity, again while all factors except task-based stress were statistically significant, only the conflict-mediating stress factor showed a moderate association. Since the high score on the role ambiguity items indicate feelings of comfort with the role, the negative correlation between role ambiguity and conflict-mediating stress can be interpreted. This may mean the clearer the expectations, goals and responsibilities administrators have the less conflict mediating stress will be experience. This interpretation seems most plausible since the wording on the role ambiguity items reflect nonstressful, comfort (i.e., unambiguous characteristics of the role) rather than the stressful nature of the role conflict items.

Psychometrically, one cannot assume a priori that people are more likely to respond to the conflict/ambiguity difference in the two scales than to the stress/comfort difference (Tracy & Johnson, 1981). In the most conservative sense, the significant relationships of these two scales to the conflict-mediating stress factor support the notion that the scales measure stress or discomfort but may not offer conclusive evidence of a distinction between role conflict and ambiguity and conflict-mediating stress. Had other stress factors such as role conflict shown more substantial correlation, more conclusive evidence might have been available to make the argument.

Also there is some controversy whether role ambiguity exhibited a reciprocal causal relationship with dimensions of role conflict (Van Sell, Brief and

Schuler, 1981). Thus, the possible explanation of the similar correlation coefficients of both role conflict and ambiguity across the factors of stress.

The Association of Burnout and Role Conflict and Ambiguity

The results of the multiple correlations between the three dimensions of burnout and role conflict and role ambiguity are reported in Table 2. All six associations are statistically significant at the .01 level. With respect to practical significance, the association of role conflict with emotional exhaustion was moderate, depersonalization was weak and personal accomplishment was very weak. It is important to note that the negative correlation between role conflict and personal accomplishment is consistent with expectations. That is, high role conflict is associated with a sense of low personal accomplishment.

Table 2. Coefficients of Correlation between Burnout Dimensions and Role Conflict and Role Ambiguity

	Dimensions of Burnout		
	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Role Conflict	.42**	.29**	-.12**
Role Ambiguity	-.36**	-.25**	.31**

*p > .05 **p > .01

Role ambiguity had the strongest association with emotional exhaustion, followed by personal accomplishment and depersonalization. Again, note that a high score on role ambiguity reflects unambiguous conditions. Therefore the negative correlation with emotional exhaustion and depersonalization indicated

the less ambiguous one's position, the less a person experiences feelings of exhaustion and depersonalization. On the other hand, the positive correlation between personal accomplishments with role ambiguity connotes that the clearer and more consistent information one receives regarding goals, duties and responsibilities of the position the greater the feeling of personal accomplishment.

With regard to studies of other educators, the strength of the associations is similar to those found in Schwab and Iwanicki's (1982) study of teacher burnout and role conflict and ambiguity. Role conflict had the highest association with emotional exhaustion (.44), followed by depersonalization (.30) and personal accomplishment (-.10).

The associations between role ambiguity and burnout were stronger for administrators than for teachers. Schwab and Iwanicki reported .22, .18 and -.24 significant correlations at the .01 level (note that Schwab and Iwaniki reversed the scoring on the role ambiguity scale, thus reporting positive correlations where this study reports negative, and visa versa). This study reflected a moderate increase over those associations. Since the goals, responsibilities, and roles of administrative positions are by their very nature more ambiguous than those of teachers, it seems logical that a stronger association was found between burnout and role ambiguity for administrators. Administrators have become "role prisoners" of an ever expanding set of roles and responsibilities in their position.

Association of Role Conflict and Role Ambiguity with Mediating Variables

In order to examine and integrate the research findings on role conflict and ambiguity as it relates to stress and burnout, several variables were included to identify potential mediating effects on the associations. The second phase of

the data analysis which has not been completed, investigates organizational, personal, and interpersonal factors which may further explain the associations in question. The *organizational* factors included such variables as level of administration and school and district enrollment.

Personal data was collected on age, gender, health, tenure as an administrator and in the current position, hours worked per week, hours of physical exercise, and sex-role orientation as indicated by the Bem Sex-Role Inventory. For example, preliminary analysis of the data supports a strong and significant association between negative health and the burnout dimensions of emotional exhaustion and depersonalization, the stress factor of conflict-mediation, and both role conflict and ambiguity. Also studies of school administrator sex-role stereotypes have shown differential effects on both stress and burnout (Torelli & Gmelch, 1992).

The *interpersonal* factor was assessed by social support subjects received from their supervisor, friends and colleagues on work-related problems, workload, and performance feedback. Several studies have reported the impact of support on burnout (Sarros & Sarros, 1992), emotional exhaustion (e.g., Neumann and Finaly-Neuman, 1991), stress (e.g., Blix and Lee, 1991), and role conflict (e.g., Caplan et al., 1975).

Conclusion

Many writers and researchers have argued that role conflict and role ambiguity are major sources of stress and burnout (Dunham, 1984). Cherniss (1980), in particular identified role conflict and ambiguity as potential sources of occupational stress and strong contributors of the incidence of burnout among human services professionals. This study sought to further explore these relationships.

Dimensions of Stress and Role Structure

In order to study the relationship of role structure to stress, it was necessary to separate the dimensions of stress and not treat stress as a unidimensional construct. The generic measures of stress used in previous studies may not be sensitive to the specific dimensions of stress influenced by role conflict and ambiguity.

The results of this study identified only one of four factors of stress (conflict-mediating stress) as the most highly associated dimension with role conflict and ambiguity. The lack of clarity about the scope and responsibilities of their job as well as contradictory expectations and conflict interactions between and among students, teachers and parents contributes more to conflict-mediating stress than to task-based, boundary-spanning, or role-conflict stress. Therefore, in order to facilitate future research and resolution regarding stress and role structure, it is necessary to explore the impact of role structure on separate dimensions of stress.

This role structure and conflict-mediating stress relationship presents practical as well as statistical significance. The stress administrators experience from resolving student discipline problems, evaluating faculty, and resolving differences with staff, students and faculty is traditionally addressed through training in conflict negotiation skills. However, the stress administrators experience also stems from administrators feeling caught in the middle: trying to help parents, teachers and students resolve differences among themselves. Many of the items in both the role conflict and conflict-mediation stress scales relate to client-to-client conflict. Therefore, in addition to developing negotiations skills,

administrators should also understand the roles and skills required to mediate other parties' conflict. The mediation process involves a different resolution pattern than traditional negotiations and it should become part of administrators' preparation.

Dimensions of Burnout and Role Structure

The majority of burnout studies in education have focused on teachers and professional support staff (Schwab & Iwaniki, 1982). A few recent studies have investigated school administrator burnout (Friesen & Sarros, 1989; Torelli & Gmelch, 1992; Whitaker, 1992). Specifically, some studies have investigated the dimensions of burnout as they relate to role structure. They have found high levels of role ambiguity resulted in low levels of personal accomplishment; and, role conflict accounted for a statistically significant amount of variance in the emotional exhaustion and depersonalization aspects of teacher burnout (Sarros, 1988; Schwab & Iwaniki, 1982; Kottkamp and Mansfield, 1985).

The results of this study generally supported earlier contentions. That is, strong associations were found between emotional exhaustion and role conflict and ambiguity, and between role ambiguity and personal accomplishments. These results are similar to those found with teachers, but with a slightly different pattern. Whereas teachers' role conflict tended to account for the variance in emotional exhaustion and depersonalization, the strongest association for administrators was primarily with emotional exhaustion. The strongest negative feeling of personal accomplishments for teachers and administrators continues to be associated with role ambiguity. Overall, these results lend support to the findings of prior studies findings that role conflict and role ambiguity represent distinct aspects of professional burnout.

Limitations and Future Research

While this study sheds new light on the relationship between role structure and stress and burnout, several limitations should help guide future research.

1. The study design did not allow for specification of causal relationships between the variables. Few studies regarding role structure have used quasi-experimental, longitudinal or experimental designs.

2. The measures of role conflict, role ambiguity and stress are subjective instruments which rely solely upon the perception of the subjects, school administrators. However, a psychometric evaluation of the Maslach Burnout Inventory, Administrative Stress Index and Role Conflict and Ambiguity Scale suggest high construct validity and reliability as well as continued use.

3. The current results of the Administrator Work Inventory study have examined only portions of the variables related to the Administrative Stress Cycle. Other personal, organizational and interpersonal variables have yet to be analyzed. More variance in the relationships may be explained as the research design becomes more complex.

4. The literature is relatively silent on coping mechanisms, stage three of the Administrator Stress Cycle, as they relate to the constructs of stressors, burnout and role structure. Both predictive and preventative work exists which would provide researchers with a framework for coping research (e.g., Lazarus & Folkman, 1984).

5. The Administrative Stress Cycle in Figure 2 indicates how several constructs in the area of administrator stress and performance can be integrated. A new model for understanding stress, burnout and role structure is needed.

Perhaps a modification of the Administrative Stress Cycle may satisfy this inadequacy.

Nevertheless, apart from the studies of Caplan et al. (1975), Kahn et al. (1976), Schwab and Iwanicki (1982), and Kottkamp and Mansfield (1985), few have investigated the link role conflict and role ambiguity to the study of work stress and burnout. To this end, the current research report has contributed to the theoretical knowledge regarding stress dimensions and role structure as well as the practical implications of administrator burnout and role conflict and ambiguity. The conclusions of this study tend to question the general solution to role conflict and stress problems. In three of the four stress dimensions, work stress is not the highly correlated with role conflict and role ambiguity. Stress management or coping skills must take these findings into consideration.

Bibliography

Beehr, T. A., Walsh, J. T., & Taber, T. D. (1976). Relationship of stress to individually and organizationally valued states: Higher order needs as a moderator. Journal of Applied Psychology. 61, 41-47.

Bem, S. L. (1975). Sex role adaptability: One consequence of psychological androgyny. Journal of Psychology and Social Psychology, 31, 634-643.

Bem, S. L. (1981). Bem Sex Role Inventory - Professional Manual. Palo Alto, CA: Consulting Psychologist Press, Inc.

Blix, A. G & Lee, J. W. (1991). Occupational stress among university administrators. Research in Higher Education. 32(3), 289-302.

Bloch, A. M. (1978). Combat neurosis in inner city schools. American Journal of Psychiatry. 135(10), 1189-1192.

Caplan, R. D., Cobb, S., French, J. R. P., Van Harrison, R., & Pinneau, S. R. (1975). Job Demands and Worker Health: Main Effects and Occupational Differences. Washington, DC.: US. Government Printing Office.

Cherniss, C. (1980). Professional Burnout in Human Service Organizations. New York: Praeger.

Chicon, D. J. & Koff, R. H. (1980). Stress and teaching. NASSP Bulletin. 64, 91-104.

Cooper, C. L. & Marshall, J. (1976). Occupational sources of stress: a review of the literature relating to coronary heat disease and mental ill health. Journal of Occupational Psychology, 49, 11-29.

Dunham, R. (1984). Stress in Teaching. New York: Nichols Publishing Co.

Feitler, F. C. & Tokar, E. B. (1981). Teacher stress: Sources, symptoms, and job satisfaction. Paper presented at American Educational Research Association, Los Angeles, CA.

Friedman, M. & Rosenman, R. H. (1974). Type A Behavior and Your Heart. New York.

Friesen, D & Sarros, J. C. (1989). Sources of burnout among educators. Journal of Organizational Behavior. 10, 179-189.

French, R. P. & Caplan, R. D. (1972). Organizational stress and individual strain. In A. J. Marrow (ed.), The Failure of Success. New York: AMACOM.

Gmelch, W. H. (1988). Research perspectives on administrative stress: causes, reactions, responses, and consequences. Journal of Educational Administration, 26(2), 134-140.

Gmelch, W. H. & Chan, W. (1992). Administrator stress and coping factors: A transactional analysis. Paper presented at the American Educational Research Association Conference, San Francisco, CA.

Gmelch, W. H. & Swent, B. (1984). Management team stressors and their impact on administrators' health. The Journal of Educational Administration, 22(2), 192-205.

Hiebert, B. & Mendalgio, S. (1988). A transactional look at school principal stress. Research Report, University of Calgary.

Iwanicki, F. E. & Schwab, R. L. (1981). A cross validation study of the Maslach burnout inventory. Educational and Psychological Measurement, 41, 1167-1174.

Jackson, J. E., Schwab, R. L. & Schuler, R. S. (1986). Toward an understanding of the burnout phenomenon. Journal of Applied Psychology, 71(4), 630-640.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D. (1964) Organizational stress: Studies in role conflict and ambiguity. New York: John Wiley and Sons.

Keller, R. T. (1975). Role conflict and ambiguity: Correlates with job satisfaction and values. Personnel Psychology. 25, 57-64.

Koch, J. L., Tung, R., Gmelch, W., & Swent, B. (1982). Job stress among school administrators: factorial dimensions and differential effects. Journal of Applied Psychology, 67(4), 493-499.

Kottkamp, R. B. & Mansfield, J. R. (1985). Role conflict, role ambiguity, powerlessness and burnout among high school supervisors. Journal of Research and Development in Education. 18(4), 29-38.

Lazarus, R. S. & Folkman, S. (1984). Stress, Appraisal and Coping. New York: Springer.

Leiter, M. P. & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. Journal of Organizational Behavior, 9, 297-308.

Maslach, C. & Jackson, S. E. (1981). The measurement of experienced burnout. Journal of Occupational Behavior, 2, 99-113.

Maslach, C. & Jackson S. E. (1986). Maslach Burnout Inventory - Manual. Palo Alto, CA: Consulting Psychologist Press, Inc.

McGrath, J. E. (1976). Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally College Publishing Company. 1351-1395.

Neumann Y. & Finaly-Neumann, E. (1991) Determinants and correlates of faculty burn-out in US research universities. Journal of Educational Administration, 29(3), 80- 92.

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. Administrative Science Quarterly, 15, 150-163.

Ryan, W. (1971). Blaming the Victim, New York: Pantheon Books.

Sarros, J., C. (1988). Administrator burn out: Findings and future directions. The Journal of Educational Administration, 26(2), 184-196.

Sarros, J. C. & Sarros, A. M. (1992). Social support and teacher burnout. Journal of Educational Administration. 30(1), 55-69.

Savery, L. K. & Detiuk, M. (1986). The perceive stress levels of primary and secondary principals. The Journal of Educational Administration, 24(2), 272-281.

Schuler, R. S., Aldag, R. J., & Brief, A. P. (1977). Role conflict and ambiguity: A scale analysis. Organizational Behavior and Human Performance. 20, 119-128.

Schwab, R. L. and Iwanicki, E. F. (1982). Perceived role conflict, role ambiguity and teacher burnout. Educational Administration Quarterly. 18(1), 60-74.

Swent, B. (1983). How administrators cope with stress. Theory Into Practice. 22(1), 70-74.

Tracy, L. & Johnson, T. W. (1981). What do the role conflict and role ambiguity scales measure? Journal of Applied Psychology. 66(4), 464-469.

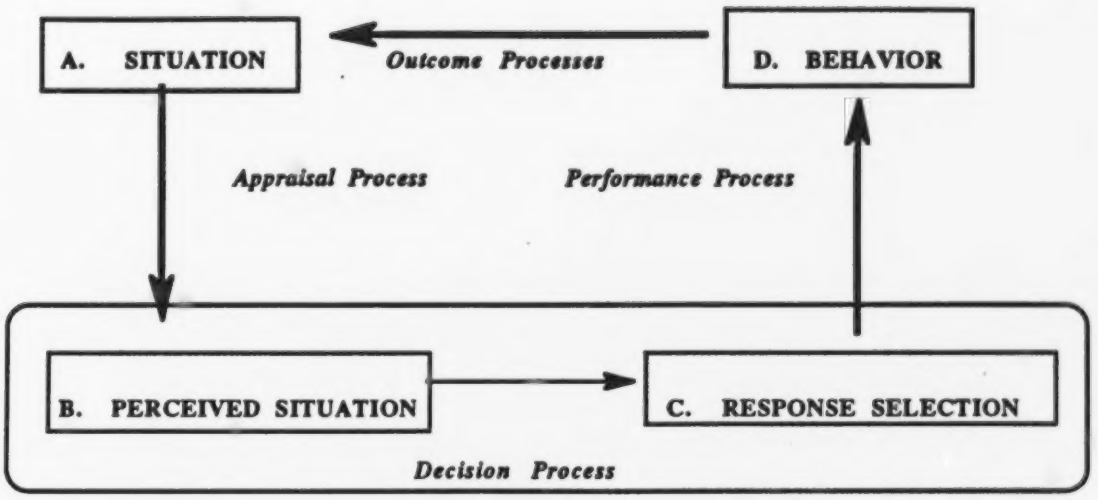
Tanner, K. C. & Atkins, T. T. (1990). Planning for stress reduction in the high school principalship. The High School Journal, 74(1), 22-37.

Torelli, J. A. & Gmelch, W. H. (1992). Occupational stress and burnout in educational administration. Paper presented at the American Educational Research Association Conference, San Francisco, CA.

Van Sell, M., Brief, A. P. & Schuler, R. S. (1981). Role conflict and role ambiguity: Integration of the literature and directions of future research. Human Relations. 34(1), 43-71.

Whitaker, K. S. (1992). Principal Burnout and personality type: Do relationships exist? Record in Educational Administration. 13(1), 87-95.

Figure 1

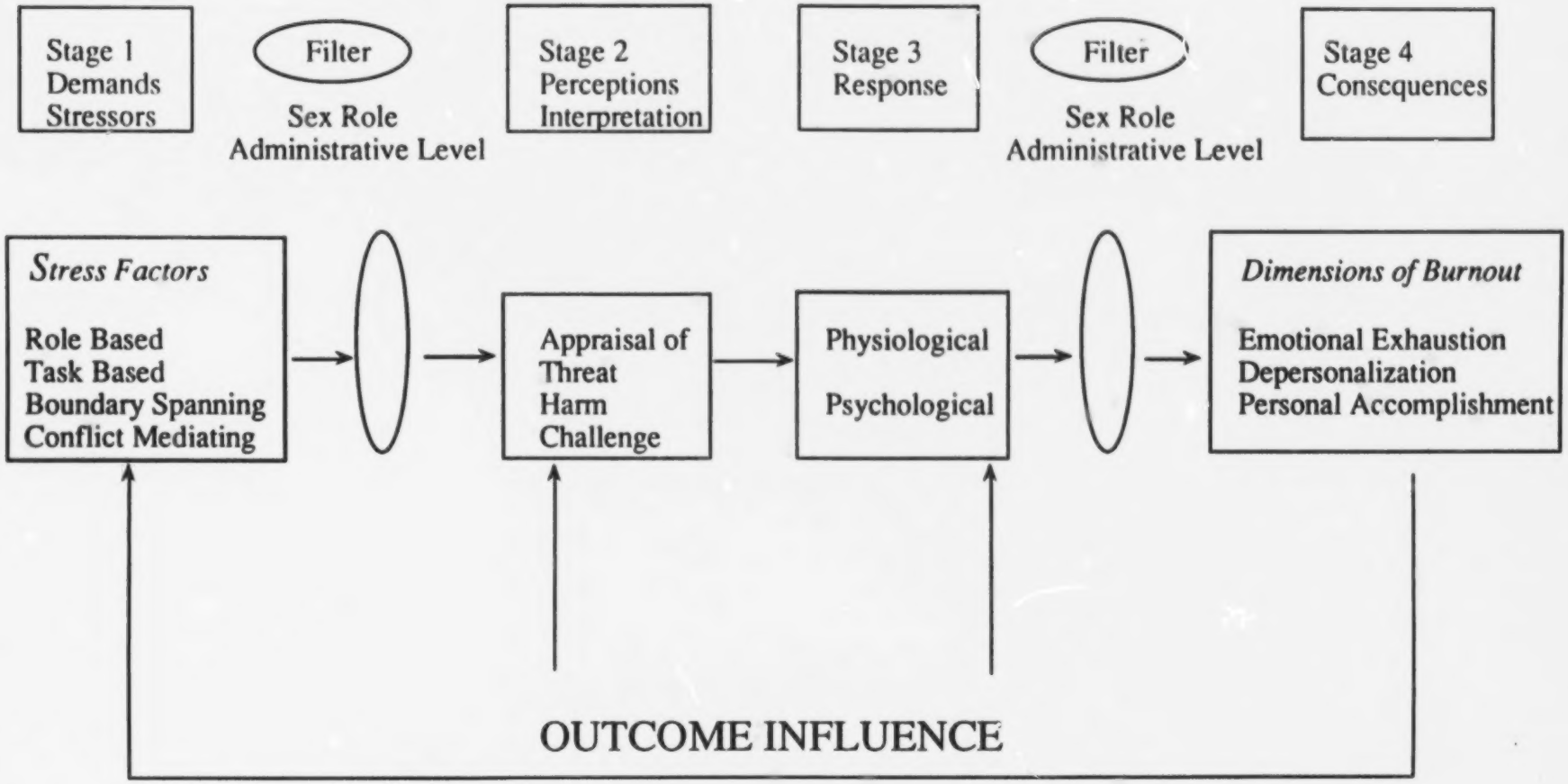


Intra-organism

A paradigm for analysis of the stress cycle: McGrath, (1973). Handbook of Industrial and Organizational Psychology, page 1356.

Figure 2

Administrator Stress Cycle



Adapted from Gmelch, W. H. and Wilke, P. K., "The Stresses of Faculty and Administrators in Higher Education," In Journal for Higher Education Management, Figure 1, p. 25